

Questions and Answers

Arsenic Regulations --- Implementation and Compliance

February 2007

The U.S. Environmental Protection Agency (U.S. EPA) has adopted a revised MCL for arsenic of 0.010 mg/L, along with monitoring requirements, arsenic health effects language, and best available technologies for arsenic contamination mitigation. The effective date for the new federal MCL was January 23, 2006. Although the California Department of Health Services (Department) is in the process of adopting new regulations, it is unknown when the state regulation will be adopted.

In the meantime, the Department will be implementing the new federal requirements. The following information is intended to facilitate water system compliance with these requirements and explain the relationship between compliance with the new federal rule and the yet-to-be-adopted state rule.

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The pending state MCL

If your source water arsenic level is not approaching the new federal MCL, there is nothing special that you need to do.

State MCL: What will the state MCL be?

There is no way to know for certain what the state MCL will be at this time, because the state regulation package is still undergoing review and has not been subject to public comment yet. Since a state MCL cannot be less stringent than a federal MCL, it will not be higher than 0.010 mg/L.

State MCL status: When will the state adopt its revised MCL?

Under law, regulation packages must proceed through a number of steps prior to adoption, including:

- Reviews by the Department's Office of Regulations, the Budget Office, Legal Services, and the state Department of Finance,
- A public comment period,
- A final review by the Office of Administrative Law, and finally,
- Signing into the California Code of Regulations by the Secretary of State.

The regulation package is currently still in the regulatory adoption process. The soonest one could anticipate adoption would be in Fall 2007; the latest could be the end of 2008.

You can follow the regulation through its adoption process by going to our website's regulation status page:

<http://www.dhs.ca.gov/ps/ddwem/publications/Regulations/statusofregulations.htm>

Department enforcement of federal rule and affected systems

Arsenic MCL enforcement: Will the Department enforce the federal MCL of 0.010 mg/L since the state regulation has not been adopted?

The Department will implement the federal MCL and monitoring requirements; however, it will not have the authority to enforce the MCL, i.e., take enforcement steps, such as issuing citations, until the state regulations have taken effect. If a violation of the federal MCL should occur, the Department will notify the U.S. EPA. The U.S. EPA will then take any necessary enforcement action. Most likely, both the Department and U.S. EPA will work with you to set up a compliance schedule.

Systems affected: What systems are required to comply with the new federal (and state) arsenic MCL requirements?

All community and nontransient-noncommunity (NTNC) water systems must comply with the new federal requirements beginning January 23, 2006.

Monitoring under new requirements

Monitoring: What monitoring does a water system have to do to be compliant with the new requirements?

- If you are monitoring quarterly for arsenic, continue to do so.
- If you have an arsenic monitoring waiver for a source with any historical data greater than 0.010 mg/L, your waiver will be rescinded and you will need to collect a sample during the first quarter of 2006.
 - If you have an arsenic monitoring waiver for a source that has never exceeded 0.010 mg/L, monitor as required under your waiver.
 - For other sources, collect and analyze an initial sample under the new rule pursuant to your routine compliance monitoring schedule.

Grandfathering data: If a system collected an arsenic sample between January 1, 2005, and January 23, 2006, is it required to grandfather this data?

No. You have the option of doing so, but you are not required to grandfather data because the requirements related to compliance monitoring did not take effect until January 2006. If the sample result was equal to or less than 0.010 mg/L, you may grandfather this sample result and continue monitoring according to your routine compliance monitoring schedule (once/3 years).

If the sample result (or arithmetic average of sample results) exceeds 0.010 mg/L and you grandfathered this data, you would be in immediate violation of the federal MCL as of January 23, 2006. Before making a decision to grandfather such data, the Department recommends that you contact your regulatory oversight person (the applicable Department office or LPA) regarding your existing monitoring compliance schedule, whether to grandfather this data, and when next to sample.

Waivers: Is it possible for a source to be waived from monitoring?

Yes; as for other inorganic chemicals, you may apply to the Department for a waiver from the routine monitoring frequency, if the source has been monitored at least three periods (groundwater) or three years (surface water) and all previous analytical results are less than 0.010 mg/L. The waiver period is nine years during which the source must be monitored once.

Rounding Policy: What is the Department's rounding policy for data and data averages?

The federal regulations require that data must be rounded to the nearest 0.001 mg/l. The Department's 2007 rounding policy is consistent with the U.S. EPA's policy for rounding. If the digit following those to be retained is 5 and is only followed by zeroes, the last digit retained is increased by one. In other words, any result equal to or greater than 0.0105 mg/L would be an exceedance of the arsenic MCL of 0.010 mg/L. When averaging results, any rounding should be performed after the mathematical operation. However, the water system should submit all data in its raw, "unrounded", form.

Result < 0.010 mg/L: If the sample result is less than or equal to 0.010 mg/L, what is a system required to do?

If the sample result does not exceed 0.010 mg/L, you must sample annually for surface water sources and once every three years for groundwater sources, unless the Department directs you to monitor quarterly because the result and/or historical data indicate levels close to the MCL.

Compliance determinations

Result > 0.010 mg/L: If the sample result is greater than 0.010 mg/L, what is a system required to do?

1. *a. Initiate a compliance determination process:* Notify the Department within 48 hours of receiving the result and collect and analyze three quarterly samples;

or

b. Initiate a sample result confirmation process: Notify the Department within 7 days of receipt of the result and collect one additional sample within 14 days to confirm the result. If the average of the two samples collected exceeds the MCL, notify the Department within 48 hours of receiving the confirmation result and collect and analyze a minimum of three more quarterly samples, consecutively;

2. Average all monitoring results (i.e. initial and confirmation) for each quarter. Calculate the running annual average based on each quarterly average to determine whether the source is in violation of the new MCL; and,

3. Proceed as follows:

- Average exceeds 0.010 mg/L: You are in violation of the revised standard. Contact the Department, notify the public, and take steps to come into compliance (see information below for more details); note that a 0.0105 average rounds to 0.011 and, therefore, exceeds the MCL and is a violation.

- Average does not exceed 0.010 mg/L: Monitor the source quarterly until the Department determines that the source is reliably and consistently below the MCL. A *minimum* of two quarterly samples that have levels below the MCL would be required before the Department would consider reducing the monitoring frequency.

Notes:

1. *Four quarters of results may not be necessary to determine a violation. If the result of any one sample collected would cause the annual average to exceed the MCL (i.e. the sum of sample results to date exceeds 0.042 mg/L), the source is immediately out of compliance).*

2. *Compliance is based on the running annual average of quarterly samples collected during a period of twelve months. If a system fails to collect all four quarters, compliance will be determined at the end of the last quarter during which monitoring was required by averaging those samples that were collected. In this case, regardless of whether or not the running annual average exceeds the MCL, the system would have committed a monitoring and reporting violation, which will lead to public notification.*

Violation timeframe: What is the soonest that a system could be in violation of the revised MCL?

If you choose to grandfather a sample result, or average of results, collected in 2005 and such results exceed 0.010 mg/L, you would be in violation as of January 23, 2006.

If you do not choose to grandfather data, the soonest your source could be in violation would be three quarters after you collect the initial sample exceeding the MCL that triggers you into quarterly monitoring to determine your compliance status, unless the sum of sample results exceeds 0.042 mg/L before you have collected all the required samples.

Source taken offline: Would a system be in violation of the MCL if it did the following: Collected a sample that exceeds the MCL, followed by one or more quarterly samples, then takes the source offline, and initiates a process to install treatment?

No. However, you should consult with your regulatory oversight person (the Department or LPA). Once you take the source offline, you must either initiate an application for an amended permit for treatment and reactivation, request that the Department designate the source as a “standby source”, or disconnect it from the distribution system. Regardless of which option you select, in your next Consumer Confidence Report, you must include all collected data, along with an explanation of what you are doing and why.

If you decide that you want to bring the source back online without treating it, you should notify the Department or your LPA. You will be required to complete the quarterly monitoring and determine compliance by averaging all the samples collected since the compliance determination was first triggered (prior to going offline), including the first sample that exceeded the MCL.

Result >10 times MCL: Are there any special requirements if the arsenic level found in a source exceeds 10 times the MCL?

There are no special requirements under the new federal regulations. However, the draft state regulations include a requirement that any source with an inorganic chemical at a level greater than 10 times the MCL must be taken off line immediately. Since water systems have been required to be in compliance with the MCL of 0.050 mg/L for many years and that level is only 5 times the new MCL, the Department does not anticipate any sources being impacted by this proposed requirement.

MCL exceedance in treated effluent: What happens if a treated effluent sample exceeds the MCL?

The objective of the arsenic treatment is to produce water that reliably meets the MCL at all times; the operations plan needs to address how treatment failures will be avoided and how the utility would respond, should one occur. However, if a utility has one or more treated water sample(s) that exceed the MCL, it must notify the Department in its monthly report, including the estimated length of the exceedance(s) and the actions taken to correct the situation. The Department will review the report and may require additional follow-up actions; depending on the situation, the Department may require public notification.

Notification and Consumer Confidence Report

Notification: What type of notification is required for an arsenic MCL violation?

An arsenic MCL violation requires a Tier 2 notification, pursuant to federal regulations and the state public notification regulations (see “Tier 2 Notice”, Title 22, section 64463.4 of the state regulations)

You must give the Tier 2 notice as soon as possible and within 30 days after you learn of the violation. In addition, you must:

- Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days; and
- Repeat the notice every three months as long as the violation continues.

Community water systems: Unless otherwise directed by the Department in writing based on the Department’s assessment of the violation, community water systems must give public notice by:

- Mail or direct delivery to each customer receiving a bill, including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system; and
- Using one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):
 - Publication in a local newspaper;
 - Posting in public places served by the water system, or on the Internet; or
 - Delivery to community organizations.

Nontransient-noncommunity water systems (NTNC): Unless otherwise directed by the Department in writing based on the Department’s assessment of the violation, NTNC water systems must give the public notice by:

- Posting in conspicuous locations throughout the area served by the water system; and
- Using one or more of the following methods to reach persons not likely to be reached by a public posting:
 - Publication in a local newspaper or newsletter distributed to customers;
 - E-mail message to employees or students;
 - Posting on the Internet or intranet; or
 - Direct delivery to each customer.

CCR: What is required in the Consumer Confidence Report (CCR)?

2006 Report (due July 2007):

Monitoring for compliance with the MCL is not required to begin until January 23, 2006. CCRs due in July of 2007 report data for the year 2006, the bulk of which the new federal MCL of 10 ppb was in effect. For more details, see the Department’s 2007 CCR guidance at <http://www.dhs.ca.gov/ps/ddwem/publications/CCR/ccrindex.htm>

The 2006 CCR is the first that could include a violation of the revised arsenic MCL, since 2006 is the first year during which compliance monitoring is required. As with all other violations, you would be required to highlight it and explain how you are addressing the violation (e.g., treatment, taking source offline).

Please note that the 2006 CCRs require special health effects language for levels between 0.005 and 0.010 mg/L.

Compliance steps

Timeframe for compliance: What timeframe will the Department allow a water system to bring a source in violation of the MCL into compliance?

The Department will work with each water system to set up a specific compliance schedule that protects public health and considers the particular issues that the water system must address to install treatment and serve water meeting the MCL. If the state has not adopted its regulations at the time that a system experiences a violation, the U.S. EPA and the Department will consult in setting up the compliance schedule.

Exemptions: Will the Department grant exemptions for the arsenic MCL?

The Department, along with the U.S. EPA, will grant exemptions if a water system meets the applicable criteria. If you wish to apply for an exemption, you may submit your application to the Department and the Department will transmit it to the appropriate staff person at U.S. EPA. The Department expects to have developed its own application procedures and criteria for exemptions in the near future.

For more information, the U.S. EPA has developed comprehensive guidance on exemptions for the arsenic regulations, which is available at:

http://www.epa.gov/safewater/arsenic/pdfs/ars_final_app_g.pdf

The Department recommends that you carefully evaluate the pros and cons of exemptions. An exemption does not mean that you do not have to comply with the MCL. It also does not mean that you will get more time to come into compliance; in fact, depending on system size and arsenic concentration, the potential exists that you could end up with far less time. If you meet the extensive criteria involved (the Department's criteria may be more stringent than U.S. EPA's), the primary advantage to your system is that you are not subject to a legal suit during the timeframe between the granting of the exemption and your coming into compliance with the MCL. The U.S. EPA has specified the exemption timeframes depending on system size and arsenic concentration and there is no flexibility.

Treatment and disposal information: Will the Department provide information regarding treatment and disposal processes and costs?

The U.S. EPA has developed extensive guidance for the revised arsenic regulations, which includes a decision tree, along with a link to the *Arsenic Treatment Technology Evaluation Handbook for Small Systems* (EPA 816-R-03-014, arsenic mitigation strategies beginning on page 11 and decision trees beginning on page 43): http://www.epa.gov/safewater/arsenic/pdfs/handbook_arsenic_treatment-tech.pdf

Additional information is available at <http://www.epa.gov/safewater/arsenic.html>. A link is provided to *Technologies and Costs for Removal of Arsenic from Drinking Water* (EPA 815-R-00-028). This document contains a somewhat more technical discussion of treatment and disposal processes, along with cost curves.

Information on treatment residual disposal options and costs can be found in a series of papers developed under the Association of California Water Agencies through this link:

<http://www.acwa.com/issues/waterquality/arsenic.asp>

POU Treatment: Can I use point-of-use (POU) water treatment devices for compliance?

California law provides for use of point-of-entry, but not POU devices; the Department is working to change the law.

In the meantime, the Department is developing guidance related to POU devices; check the drinking water program website during coming months:

<http://www.dhs.ca.gov/ps/ddwem/chemicals/arsenic/newmcl.htm>

Note that only devices certified under the Department's Water Treatment Device Certification Program will be acceptable for use. See

<http://www.dhs.ca.gov/ps/ddwem/technical/certification/devices.html>

Funding coordination: What if a system has applied for SRF or Prop 50 funding to solve the arsenic problem? What if the system has already applied for a different problem---does the system need to reapply or will the Department re-rank the system?

If the system has applied for an arsenic problem, it need not resubmit a pre-application and it will stay in the same rank as before.

If the system has applied for a problem other than arsenic, but now has data indicating that it will, or does, exceed the new arsenic MCL and wishes to apply for arsenic as well, then a new pre-application might need to be submitted during the next application cycle. To be certain, the system should contact their district engineer.